determining an inverse frequency curve to the frequency curve;

simulating the inverse frequency curve in a filter device as a transfer function of the filter device; and

compensating for the frequency response of the flat surface loudspeaker by the filter device, which is connected between the sound source and the flat surface loudspeaker in an operating state, based upon the transfer function.

2. (Amended) The method as claimed in claim 1, wherein the transfer function of the filter device is simulated by digital filters.

3. (Amended) The method as claimed in claim 2, wherein the transfer function is formed by FIR (Finite Impulse Response) filters, whose filter coefficients are derived from the inverse frequency curve.

4. (Amended) A flat surface loudspeaker comprising:

at least one oscillating coil, mounted on a surface which, when stimulated by electrical sound signals, causes this surface to oscillate in order to emit sound; and

a filter device for the sound signals, connected upstream of the at least one oscillating coil, wherein a transfer function of the filter device is the inverse of a frequency response of the flat surface loudspeaker.

5. (Amended) The flat surface loudspeaker as claimed in claim 4, wherein the filter device is in the form of a digital filter.

6. (Amended) The flat surface loudspeaker as claimed in claim 5, wherein the filter device is formed by FIR (Finite Impulse Response) filters.

7. (Amended) The flat surface loudspeaker as claimed in claim 5, wherein the filter device includes a sample and hold element as the input element, connected via an analogue-to-digital converter to the digital filter, whose output is connected to a digital-to-analogue converter.

8. (Amended) The flat surface loudspeaker as claimed in claim 5, wherein the filter device is equipped with a digital signal processor.

Please add the following new claims:

-- 9. The flat surface loudspeaker as claimed in claim 6, wherein the filter device includes a sample and hold element as the input element, connected via an analogue-to-digital converter to the digital filter, whose output is connected to a digital-to-analogue converter.

10. The flat surface loudspeaker as claimed in claim 6, wherein the filter device is equipped with a digital signal processor.

11. The flat surface loudspeaker as claimed in claim 7, wherein the filter device is equipped with a digital signal processor.

12. The flat surface loudspeaker as claimed in claim 9, wherein the filter device is equipped with a digital signal processor.

13. The method of claim 1, wherein the at least one of oscillating coil is mounted on a surface in the form of a plate.

14. The method of claim 1, wherein the at least one oscillating coil has predetermined material characteristics.

15. The flat surface loudspeaker as claimed in claim 4, wherein the at least one oscillating coil is mounted on a surface in the form of a plate.